

Competency Assessment Instrument (CAI): An Instrument to Assess Competencies of Clinicians Providing Treatment to People with Severe Mental Illness

Background and History

Serious, persistent mental illnesses such as schizophrenia and bipolar disorder are expensive and challenging to treat. One approach to enhance the quality of care is to improve provider competencies. Provider competencies include the attitudes, knowledge, and skills providers need to deliver high quality care. The measurement of provider competencies may be of use in hiring, education, provider profiling and quality improvement efforts.

Given the need to measure competencies in clinicians, researchers at the VA Desert Pacific Mental Illness Research, Education and Clinical Center (MIRECC), Value Options Healthcare, RAND, UCLA and Comprehensive Neurosciences created a new survey instrument. The instrument was developed with support from the Center for Health Care Strategies (funded by the Robert Wood Johnson Foundation) and the Desert Pacific MIRECC. Called the “Competency Assessment Instrument (CAI),” it was developed to measure a set of core competencies critical to recovery, rehabilitation and empowerment in persons with serious, persistent mental illness.

The competencies being measured were drawn from a core competency set developed by Alexander Young, Sandra Forquer and colleagues (Young et al., 2000). This competency set was developed by reviewing existing literature and competency statements, and conducting focus groups, interviews, and an expert panel with representatives of clients, family members, clinicians, managers, policy-makers and experts. A set of 37 competencies was identified as important in determining outcomes. It emphasizes concepts such as rehabilitation, self-help, client empowerment, and recovery. These competencies are often lacking in current clinicians.

The Competency Assessment Instrument (CAI)

The CAI measures 15 provider competencies drawn from the set of Young et al (2000). These 15 are central to recovery-oriented care. Each competency is measured with its own scale, which is made of a combination of three to five Likert items requesting a numerical response on a four or five-point scale. Demographic questions assessing race/ethnicity, gender, education level, job title, job duties, and number of years in mental health are also included. The first two tables below show the 15 competency scales, the items that comprise them, and the corresponding item number on the CAI. Using the baseline and two-week data from the project, Chinman et al. (In press) conducted psychometric analyses on the 15 CAI scales and found that the scales were reliable and valid.

The next two tables in this section provide scale-by-scale instructions on how to calculate the CAI scale scores, including which items need to be reverse coded. The final table displays a set of items that were included in the final CAI but that were not part of any of the 15 scales.

Competency Assessment Instrument CAI Scales & Items

Scales	Item #	Items
Goal Functioning ¹ : Assists clients in acquiring the skills needed to get and keep chosen goals.	23a	Assessed the client's level of functioning in relation to a personal goal
	23b	Discussed the client's strengths and weaknesses in relation to a personal goal
	23c	Discussed strategies to help the client achieve their goals
Stress ¹ : Helps clients understand and cope with stressors that trigger deterioration.	23d	Helped the client identify people who can assist them during a crisis
	23e	Identified triggers that cause the client's symptoms to get worse
	23f	Identified warning signs that come before the client gets symptoms
	23g	Helped the client decide how to respond to triggers and warning signs
Client Preferences ² : Learns and respects their clients' preferences regarding their treatment.	15	It is sometimes necessary to disregard a client's preferences in order to provide the best treatment
	16	Every behavioral health provider needs to know their clients' preferences about the selection of psychiatric medications
	20	Respecting clients' choices improves their functioning
	21	Almost all clients can learn how to make well-informed choices about their care
Intensive Case Management ³ : Leaves the office to help clients obtain services and housing.	32b	Leaving the office with clients to help them obtain housing or benefits
	32c	Helping clients find more programs, entitlements, or services
	32d	Assisting clients when agencies deny them services or benefits
Holistic Approach ² : Elicits clients' life experiences in a trusting atmosphere.	25	The diagnosis of a client affects whether rehabilitation is possible
	26	It is best to keep my work with clients focused on their mental illness
	27	Whether a client can return to work is related to how strong their psychotic symptoms are
	28	The goals of "normal" people are often too stressful for clients
Family Education ⁶ : Educates family members and other caregivers about mental illness.	45a	How confident are you about providing education to family members about psychiatric illness
	45b	How confident are you about providing education to family members about medication treatment
	45c	How confident are you about providing education to family members about rehabilitation
	45d	How confident are you about providing education to family members about mutual support groups
Rehabilitation: Practices professionally accepted psychiatric rehabilitation. (Scale has items with different response choices-see individual item)	33a	² Try to direct Jane towards more practical ideas that don't involve horses
	33b	² Acknowledge her interest, but don't intervene since her goal does not seem realistic
	34	⁹ What percentage of all your clients could benefit from rehabilitation services that are designed to substantially improve their functioning?
	35	⁹ What percentage of all your clients could benefit from rehabilitation services that specifically focus on work?
	36	⁹ What percentage of all your clients are currently receiving rehabilitation services that focus on work?
Skills advocacy: Creates opportunities for clients to practice skills. (Scale has items with different response choices-see individual item)	46	⁷ How often do you arrange activities in which clients can practice making decisions for instance, shopping or opening a bank account?
	47	⁷ How often do you assist clients in maintaining activities that are meaningful to them?
	48	⁷ How often do you teach clients confidence building and self-advocacy skills?
	32a	³ How often do you usually teach clients about medication and the symptoms of their illness?
	32f	³ How often do you usually teach clients about rehabilitation?

Competency Assessment Instrument CAI Scales & Items Continued

Scales	Item #	Items
Integration/ Natural Supports ⁵ : Encourages clients to choose, find and use their own natural supports.	42a	How many of your clients are involved in 12-step groups such as AA or Double Trouble?
	42b	How many of your clients are involved in mutual support groups?
	42c	How many of your clients are involved in hobby clubs or other organized social groups?
Stigma ² : Works with clients to cope with being stigmatized.	41a	Clients with mental illness experience discrimination every day
	41c	I am aware of common stereotypes about people with mental illness
	41d	The stress of discrimination often causes clients' symptoms to increase
Community Resources ⁴ : Refers clients to local employment, self-help and other rehabilitation programs.	37	How often does the presence of too few programs that help people obtain employment interfere with improving your client's functioning
	39	How often does the difficulty of getting clients accepted into rehabilitation programs interfere with improving your client's functioning
	40	How often does the lack of self-help groups interfere with improving your client's functioning
Medication Management ² : Teaches clients symptom and side-effect self-monitoring skills.	30	All clients can learn to accurately identify psychiatric symptoms and medication side-effects
	31	With correct use of medication, symptoms can be reduced to very low levels in almost all clients
Family Involvement ³ : Involves family members and helps them cope effectively.	32e	Teaching family members about mental illness
	32g	Gathering information from family members or friends
	32i	Helping family members cope with stress
Team Value ² : Provides services as part of a strongly coordinated team.	51	Mental health professionals from other agencies are usually included when we problem solve about particular clients
	52	I often don't have enough time to coordinate services between the various members of the treatment team
	53	I can have other staff members assist with my clients when those staff member have a particular skill
	54	We have regular meetings as a team to problem-solve about particular clients
Evidence-based practice ⁸ : Focuses on services that have been demonstrated to improve outcomes.	22a	How effectively does completing a structured diagnostic assessment improve outcomes in your clients
	22b	How effectively does adjusting, when necessary, the dosage of psychiatric medication improve outcomes in your clients
	22c	How effectively does providing intensive treatment in the community not at clinics and offices improve outcomes in your clients
	22d	How effectively does educating and helping family and friends improve outcomes in your clients
	22e	How effectively does teaching the client how to improve their daily functioning improve outcomes in your clients
Optimism (Grusky et al, 1989): Assesses the degree to which providers in community mental health systems believe that their clients will improve and have positive outcomes.	12a	Will remain in the mental health system for the rest of their lives
	12b	Will be able to greatly increase their involvement in the community
	12c	Will be able to function very well in the community
	12d	Will need to be hospitalized again in the future
	12e	Will remain pretty much as they are now
	12f	Will find work that enables them to be economically self-sufficient

*Scale Response Choices:

- ¹ 1=All clients to 5=few or no clients
- ² 1=Strongly agree to 5=Strongly disagree
- ³ 1=Several times a day to 5=Never
- ⁴ 1=Always a problem to 5=Never a problem
- ⁵ 1=All to 5=None

- ⁶ 1=Completely confident to 5=Little or no confidence
- ⁷ 1=All the time to 5=Rarely or never
- ⁸ 1=Extremely effective to 5=Little or no effect
- ⁹ 0% to 100

How to calculate the CAI scales

The following table shows how to calculate a single score for each scale. Because different types of items are combined to form the scales, we recommend recoding the items (and their scales) so that they range from 0 to 1 (with 0 representing the absence of competency and 1 representing complete competency).

Scales	Item #	Procedures	R=Item score is Reversed
Goal Functioning	23a	• Recode all three items using the following: (item score-1)/4	
	23b	• Average the three scores together to create a scale score	
	23c	• Only calculate the scale if 2 out of the 3 items are present (non-missing)	
Stress	23d	• Recode all four items using the following: (item score-1)/4	
	23e	• Average the four scores together to create a scale score	
	23f	• Only calculate the scale if 3 out of the 4 items are present (non-missing)	
	23g		
Client Preferences	15	• Reverse and recode #15 with the following: ((6-item score)-1)/4	R
	16	• Recode #s 16,20,21 using the following: (item score-1)/4	
	20	• Average the four scores together to create a scale score	
	21	• Only calculate the scale if 3 out of the 4 items are present (non-missing)	
Intensive Case Management	32b	• Recode all three items using the following: (item score-1)/4	
	32c	• Average the three scores together to create a scale score	
	32d	• Only calculate the scale if 2 out of the 3 items are present (non-missing)	
Holistic Approach	25	• Reverse and recode all four items with the following: ((6-item score)-1)/4	R
	26	• Average the four scores together to create a scale score	R
	27	• Only calculate the scale if 3 out of the 4 items are present (non-missing)	R
	28		R
Family Education	45a	• Recode all four items using the following: (item score-1)/3	
	45b	• Average the four scores together to create a scale score	
	45c	• Only calculate the scale if 3 out of the 4 items are present (non-missing)	
	45d		
Rehabilitation	33a	• Reverse and recode #s 33a & 33b with the following: ((6-item score)-1)/4	R
	33b	• Reverse and recode #s 34,35,36 with the following: (100-item score)/100	R
	34	• Average the five scores together to create a scale score	R
	35	• Only calculate the scale if 3 out of the 5 items are present (non-missing)	R
	36		R
Skills advocacy	46	• Recode all five items using the following: (item score-1)/4	
	47	• Average the five scores together to create a scale score	
	48	• Only calculate the scale if 3 out of the 5 items are present (non-missing)	
	32a		
	32f		
Integration/ Natural Supports	42a	• Recode all three items using the following: (item score-1)/4	
	42b	• Average the three scores together to create a scale score	
	42c	• Only calculate the scale if 2 out of the 3 items are present (non-missing) • Count the "Don't know" response (=6) as missing	
Stigma	41a	• Recode all three items using the following: (item score-1)/4	
	41c	• Average the three scores together to create a scale score	
	41d	• Only calculate the scale if 2 out of the 3 items are present (non-missing)	
Community Resources	37	• Reverse and recode all three items with the following: ((6-item score)-1)/4	R
	39	• Average the three scores together to create a scale score	R
	40	• Only calculate the scale if 2 out of the 3 items are present (non-missing)	R
Medication Management	30	• Recode both items using the following: (item score-1)/4	
	31	• Average the two scores together to create a scale score • Only calculate the scale if both items are present (non-missing)	
Family Involvement	32e	• Recode all three items using the following: (item score-1)/4	
	32g	• Average the three scores together to create a scale score	
	32i	• Only calculate the scale if 2 out of the 3 items are present (non-missing)	

How to calculate the CAI scales continued

Scales	Item #	Procedures	R=Item score is Reversed
Team Value	51	<ul style="list-style-type: none"> Reverse and recode #52 with the following: $((6\text{-item score})-1)/4$ Recode #s 51,53,54 using the following: $(\text{item score}-1)/4$ Average the four scores together to create a scale score Only calculate the scale if 3 out of the 4 items are present (non-missing) 	
	52		R
	53		
	54		
Evidence-based practice	22a	<ul style="list-style-type: none"> Recode all five items using the following: $(\text{item score}-1)/3$ Average the five scores together to create a scale score Only calculate the scale if 3 out of the 5 items are present (non-missing) 	
	22b		
	22c		
	22d		
	22e		
Optimism	12a	<ul style="list-style-type: none"> Reverse and recode #12a,12d,12e with the following: $((6\text{-item score})-1)/4$ Recode #s 12b,12c,12f using the following: $(\text{item score}-1)/4$ Average the six scores together to create a scale score Only calculate the scale if 4 out of the 6 items are present (non-missing) 	R
	12b		
	12c		
	12d		R
	12e		R

Additional non-scale items on the CAI

Item #	Items
13	My clients know what to do when their mental health begins to deteriorate
14	Every client served by my agency should have a clearly documented crisis prevention plan
17	Functional assessment consists primarily of identifying a client's capacities regarding activities of daily living
18	When a client has a suggestion for improving our services, I am often able to get it implemented
19	The program I work in has clear procedures for implementing client suggestions
20	Respecting clients' choices improving functioning
21	Almost all clients can learn to make well-informed choices about their care
23h	Identify role models who demonstrate that improvement is possible
23i	Expose clients to more independent living options in their community
24	I always seek out clients who have left treatment to see if they should return to treatment
29	It is best to wait until clients are mostly symptom free before discussing their goals
38	Little client interest in changing their functioning
41b	There is little that clients can do about discrimination
43	I always encourage my clients to join self-help groups
44	As long as a client is seeing their psychiatrist, other staff usually don't need to ask about medication side-effects
49	Involving family members or friends in treatment often makes things worse for the client
50	I have contacts at a number of community programs where my clients can become involved
55	I talk on a regular basis with my clients' psychiatrists

References

1. Chinman MJ, Young, AS, Rowe M, Forquer S, Knight E, Miller A. (2003; in press). An instrument to assess competencies of providers treating severe mental illness. Mental Health Services Research.
2. Grusky O, Tierney, K, Spanish MT (1989). Which community mental health services are most important? Administration & Policy in Mental Health; 17: 3-16.
3. Young, AS, Forquer, SL, Tran, A, Starzynski, M, & Shatkin, J (2000). Identifying clinical competencies that support rehabilitation and empowerment in individuals with severe mental illness. Journal of Behavioral Health Services Research, 27, 321-333.